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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,168

12/10/2003

Sven Thate

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05/20/2008

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EXAMINER

ONEILL, KARIE AMBER

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/731,168	Applicant(s) THATE ET AL.	
	Examiner Karie O'Neill	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Applicant's amendment filed on January 22, 2008, was received. Claim 1 was amended. None of the claims have been cancelled. Claim 13 has been added as new. Therefore, Claims 1-13 are pending in this office action.

Claim Rejections - 35 USC § 112

2. The rejection of Claim 1 under 35 U.S.C. 112, second paragraph, has been overcome based on the amendment to the claim.

3. The rejection of Claims 2-3 under 35 U.S.C. 112, second paragraph, has been overcome based on the explanation given in the specification on page 7, lines 22-29.

4. The rejection of Claims 4-5 under 35 U.S.C. 112, second paragraph, has been overcome based on the explanation given in the specification of page 8, lines 19-32.

Claim Rejections - 35 USC § 102

5. The rejection of Claims 1-12, under 35 U.S.C. 102(b) as being anticipated by Reddy et al. (US 5,084,144), has been withdrawn based on the arguments on pages 7-8 of the Remarks submitted January 22, 2008.

6. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabata et al. (US 6,723,464 B2).

With regard to Claims 1 and 13, Tabata et al. discloses a method of fabricating a membrane-electrode assembly (MEA), particularly for PEM fuel cells, wherein the MEA comprises a polymer-electrolyte membrane (1) having reaction layers, or catalyst layers (2, 3) applied directly to both sides of the solid polymer electrolyte membrane (column 2, lines 49-51), wherein at least one of the reaction layers includes at least one catalytic component (column 4 lines 2-7). Tabata et al. discloses the MEA also having gas distribution layers (4, 5). Tabata et al. also discloses wherein the method comprises the following steps: (A) introducing ions of the at least one catalytic component (2,3) into the polymer- electrolyte membrane (1) (column 8, lines 51-59); (B) subsequently, applying the electron conductor to both sides of the polymer- electrolyte membrane, the electron conductor being a gas diffusion electrode (4, 5) (column 6 lines 30-45); and (C) electrochemically depositing the ions of the catalytic component, which, in step (A), were introduced into the polymer-electrolyte membrane, introduced into the reaction layers, onto the electron conductor through the process of applying a voltage across the fuel cell.(column 14, lines 46-67 and column 15, lines 1-15), at which time the catalyst from the polymer exchange membrane will move through the membrane to the electrode in which the electrons are flowing

With regard to Claims 2-3, Tabata et al. discloses wherein the electrochemical deposition of the ions of the catalytic component in step (C) is carried out under fuel cell conditions, such as applying a voltage across the fuel cell (column 14, lines 46-67 and column 15, lines 1-15), and wherein a variation of operating conditions is effected during

the deposition under fuel cell conditions, for instance a more stable cell voltage and a lower average decay rate (column 15, lines 5-25).

With regard to Claims 4-5, Tabata et al. discloses wherein the electrochemical deposition of the ions of the catalytic component in step (C) is carried out under electrolytic conditions, wherein the electrolytic conditions comprise the application of a constant or time-variant voltage (column 14, lines 46-67 and column 15, lines 1-15).

With regard to Claims 6-8, Tabata et al. discloses wherein in step (C) at least one element from the 3rd to 14th group of the periodic table, including iron, chromium, nickel, platinum, is deposited as the catalytic component onto the electron conductor on at least one side of the polymer- electrolyte membrane, and wherein at least one of the Pt, Fe, Ni, Cr and other precious metals is deposited as the catalytic component on the cathode-side electron conductor and the anode-side electron conductor since the catalyst components on both sides of the polymer electrolyte membrane are the same material (column 8 lines 20-37).

With regard to Claim 9, Tabata et al. discloses wherein the electron conductor, or gas diffusion layer, comprises carbon paper, woven carbon fabric, nonwoven carbon fabric, carbon felt (column 10 lines 14-19).

With regard to Claims 10 and 11, Tabata et al. discloses wherein the electron conductor, or gas diffusion layer, applied in step (B), is coated with a solution of an ion conducting resin and catalyst particles (column 10 lines 45-53), in which the catalyst particles comprise at least one of iron, chromium, nickel, platinum and other precious metals (column 8 lines 20-27).

With regard to Claim 12, Tabata et al. discloses wherein the catalytic component in step (A) is introduced into the polymer-electrolyte membrane in an amount of from 0.01-1mg/cm² (column 8, lines 48-49).

Response to Arguments

7. Applicant's arguments with respect to Claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571)272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karie O'Neill
Examiner
Art Unit 1795

KAO

/Mark Ruthkosky/
Primary Examiner, Art Unit 1795